Amendments to the Claims

Please **cancel** claims 1-21, 24, 34, 39, and 41-51 without disclaimer of, or prejudice to, the underlying subject matter. Please **add** new claims 52-56.

1-21 (Cancelled)

22. (Original) A method for diagnosing glaucoma in a sample obtained from a cell or a bodily fluid by detecting a polymorphism in a promoter region of the optineurin gene, comprising the steps of:

(A) incubating under conditions permitting nucleic acid hybridization, a marker nucleic acid molecule, said marker nucleic acid molecule having a nucleic acid sequence that specifically hybridizes to a sequence selected from the group consisting of SEQ ID NO: 1 and a complement thereof, and a complementary nucleic acid molecule obtained from a sample, wherein nucleic acid hybridization between said marker nucleic acid molecule and said complementary nucleic acid molecule permits the detection of said polymorphism;

(B) permitting hybridization between said marker nucleic acid molecule and said complementary nucleic acid molecule; and

(C) detecting the presence of said polymorphism, wherein the detection of said polymorphism is diagnostic of glaucoma.

23. (Original) The method for diagnosing glaucoma of claim 22, wherein said polymorphism is a single nucleotide polymorphism.

24. (Cancelled)

25. (Original) The method for diagnosing glaucoma of claim 22, further comprising a second marker nucleic acid molecule.

26. (Original) The method for diagnosing glaucoma of claim 22, wherein the cell or bodily fluid comprises ocular tissue.

27. (Original) The method for diagnosing glaucoma of claim 22, wherein the cell or bodily fluid comprises optic nerve cells.

28. (Original) The method for diagnosing glaucoma of claim 22, wherein the cell or bodily fluid comprises retinal cells.

29. (Original) The method for diagnosing glaucoma of claim 22, wherein the cell or bodily fluid comprises a bodily fluid selected from the group consisting of glaucomatous cell extract, fluid from the anterior chamber of the eye, blood, lymph, and serum.

30. (Original) The method for diagnosing glaucoma of claim 22, further comprising amplifying the complementary nucleic acid molecule obtained from a sample using a nucleic acid amplification method.

31. (Original) The method for diagnosing glaucoma of claim 22, wherein the nucleic acid amplification method is selected from the group consisting of polymerase

chain amplification, ligase chain reaction, oligonucleotide ligation assay, thermal amplification, and transcription base amplification.

32. (Original) A method for prognosing glaucoma in a sample obtained from a cell or a bodily fluid by detecting a polymorphism in a promoter region of the optineurin gene, comprising the steps of:

(A) incubating under conditions permitting nucleic acid hybridization, a marker nucleic acid molecule, said marker nucleic acid molecule having a nucleic acid sequence that specifically hybridizes to a sequence selected from the group consisting of SEQ ID NO: 1 and complement thereof, and a complementary nucleic acid molecule obtained from a sample, wherein nucleic acid hybridization between said marker nucleic acid molecule and said complementary nucleic acid molecule permits the detection of said polymorphism;

(B) permitting hybridization between said marker nucleic acid molecule and said complementary nucleic acid molecule; and

(C) detecting the presence of said polymorphism, wherein the detection of said polymorphism is prognostic of glaucoma.

33. (Original) The method for prognosing glaucoma of claim 32, wherein said polymorphism is a single nucleotide polymorphism.

34. (Cancelled)

35. (Original) The method for prognosing glaucoma of claim 32, further comprising a second marker nucleic acid molecule.

36. (Original) A method for diagnosing or prognosing glaucoma in a sample obtained from a cell or a bodily fluid by detecting a polymorphism in a promoter region of the optineurin gene, comprising the steps of:

(A) incubating under conditions permitting nucleic acid hybridization, a marker nucleic acid molecule, said marker nucleic acid molecule having a nucleic acid sequence that specifically hybridizes to a optineurin promoter sequence or its complement, and a complementary nucleic acid molecule obtained from a sample, wherein nucleic acid hybridization between said marker nucleic acid molecule and said complementary nucleic acid molecule permits the detection of said polymorphism;

(B) permitting hybridization between said marker nucleic acid molecule and said complementary nucleic acid molecule; and

(C) detecting the presence of said polymorphism, wherein the detection of said polymorphism is diagnostic or prognostic of glaucoma.

37. (Original) The method for diagnosing or prognosing glaucoma of claim 36, wherein said optineurin promoter sequence comprises SEQ ID NO: 1 or a fragment thereof.

38. (Original) The method for diagnosing or prognosing glaucoma of claim 36, wherein said marker nucleic acid is capable of specifically detecting a single nucleotide polymorphism.

39. (Cancelled)

40. (Original) The method for diagnosing or prognosing glaucoma of claim 36, further comprising a second marker nucleic acid molecule.

41-51 (Cancelled)

52. (New) A method for diagnosing glaucoma in a sample obtained from a cell or a bodily fluid by detecting a polymorphism in a promoter region of the optineurin gene, comprising the steps of:

(A) incubating under conditions permitting nucleic acid hybridization, a marker nucleic acid molecule, said marker nucleic acid molecule having a nucleic acid sequence capable of specifically detecting a single nucleotide polymorphism, wherein said single nucleotide polymorphism occurs at a location in SEQ ID NO: 1 that is selected from the group consisting of 391, 691, 709, 887, 894, 987, 1112, 1505, 1606, 2405, 2606, 3313, 3555, 3625, 3629, 3882, 3988, and 4452, and a complementary nucleic acid molecule obtained from a sample, wherein nucleic acid hybridization between said marker nucleic acid molecule and said complementary nucleic acid molecule permits the detection of said single nucleotide polymorphism;

(B) permitting hybridization between said marker nucleic acid molecule and said complementary nucleic acid molecule; and

(C) detecting the presence of said single nucleotide polymorphism, wherein the detection of said single nucleotide polymorphism is diagnostic of glaucoma.

53. (New) The method for diagnosing glaucoma of claim 52, wherein said single nucleotide polymorphism occurs at a location in SEQ ID NO: 1 that is selected from the group consisting of 391, 709, 887, and 2606.

54. (New) A method for prognosing glaucoma in a sample obtained from a cell or a bodily fluid by detecting a polymorphism in a promoter region of the optineurin gene, comprising the steps of:

(A) incubating under conditions permitting nucleic acid hybridization, a marker nucleic acid molecule, said marker nucleic acid molecule having a nucleic acid sequence capable of specifically detecting a single nucleotide polymorphism, wherein said single nucleotide polymorphism occurs at a location in SEQ ID NO: 1 that is selected from the group consisting of 391, 691, 709, 887, 894, 987, 1112, 1505, 1606, 2405, 2606, 3313, 3555, 3625, 3629, 3882, 3988, and 4452, and a complementary nucleic acid molecule obtained from a sample, wherein nucleic acid hybridization between said marker nucleic acid molecule and said complementary nucleic acid molecule permits the detection of said single nucleotide polymorphism;

(B) permitting hybridization between said marker nucleic acid molecule and said complementary nucleic acid molecule; and

(C) detecting the presence of said single nucleotide polymorphism, wherein the detection of said single nucleotide polymorphism is prognostic of glaucoma.

55. (New) The method for prognosing glaucoma of claim 54, wherein said single nucleotide polymorphism occurs at a location in SEQ ID NO: 1 that is selected from the group consisting of 391, 709, 887, and 2606.

56. (New) The method for diagnosing glaucoma of claim 22, wherein the cell or bodily fluid comprises blood.